

10/055799

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FILE COVERS 1907 - 29 Apr 2003 VOL 138 ISS 18

FILE LAST UPDATED: 28 Apr 2003 (20030428/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s potassium (P) (sorbate or sorbic)

486697 POTASSIUM

15 POTASSIUMS

486700 POTASSIUM

(POTASSIUM OR POTASSIUMS)

5498 SORBATE

844 SORBATES

5926 SORBATE

(SORBATE OR SORBATES)

5406 SORBIC

L1 1335 POTASSIUM (P) (SORBATE OR SORBIC)

=> s corrosive or corrosion or anticorrosive or anticorrosion or anti-corrosive or anti-corrosion

26338 CORROSIVE

179 CORROSIVES

26452 CORROSIVE

(CORROSIVE OR CORROSIVES)

279885 CORROSION

333 CORROSIONS

279949 CORROSION

(CORROSION OR CORROSIONS)

22754 ANTICORROSIVE

147 ANTICORROSIVES

22828 ANTICORROSIVE

(ANTICORROSIVE OR ANTICORROSIVES)

8321 ANTICORROSION

303178 ANTI

8 ANTIS

303185 ANTI

(ANTI OR ANTIS)
 26338 CORROSIVE
 179 CORROSIVES
 26452 CORROSIVE
 (CORROSIVE OR CORROSIVES)
 496 ANTI-CORROSIVE
 (ANTI (W) CORROSIVE)
 303178 ANTI
 8 ANTIS
 303185 ANTI
 (ANTI OR ANTIS)
 279885 CORROSION
 333 CORROSIONS
 279949 CORROSION
 (CORROSION OR CORROSIONS)
 797 ANTI-CORROSION
 (ANTI (W) CORROSION)
 L2 300700 CORROSIVE OR CORROSION OR ANTICORROSIVE OR ANTICORROSION OR
 ANTI-CORROSIVE OR ANTI-CORROSION

=> s 11 and 12

L3 14 L1 AND L2

=> d 13 1-14 all

L3 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2003 ACS
 AN 2002:408856 CAPLUS
 DN 136:405474
 TI 2,4-Hexadienoic acid or its alkali salts and/or derivatives for preventing
 oxidative **corrosion** of metals in presence of water
 IN Beck, Robert A.; Manos, Paul D.
 PA Ingenuity and Ideas, L.L.C., USA
 SO PCT Int. Appl., 53 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C23F
 CC 56-10 (Nonferrous Metals and Alloys)
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------|--|----------|-----------------|----------|
| PI | WO 2002042523 | A2 | 20020530 | WO 2001-US45615 | 20011025 |
| | WO 2002042523 | A3 | 20030116 | | |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | AU 2002039438 | A5 | 20020603 | AU 2002-39438 | 20011025 |
| | US 2003041929 | A1 | 20030306 | US 2001-55799 | 20011025 |
| PRAI | US 2000-243943P | P | 20001027 | | |
| | WO 2001-US45615 | W | 20011025 | | |

AB The oxidative **corrosion** of metal surfaces is prevented by application of **corrosion** inhibitor selected from: (a) 2,4-trans, trans-hexadienoic acid (I); (b) alkali salt of I, as K sorbate; or (c) other derivs. that conserve I moiety present in their mol. structures. The I **anti-corrosion** agent is applied at 0.2-58% by wt. in combination with a coating or paint capable of forming a

moisture-resistant barrier over the metal surface. The I-based inhibitor provides nontoxic **anti-corrosion** protection of metals stored or operated in water, or in the presence of water vapor. The AA 1100 tech. Al sheet specimens in hot (120.degree. F) tap water contg. I showed only slight **corrosion**, vs. **corrosion** and pitting in the absence of I.

ST hexadienoic acid **corrosion** inhibitor metal coating water; aluminum aq **corrosion** inhibitor trans hexadiene moiety

IT **Corrosion** inhibitors
(2,4-hexadienoic acid or its alkali salts as inhibitors of oxidative metal **corrosion**)

IT Water distribution systems
(**corrosion** inhibitor for; 2,4-hexadienoic acid or its alkali salts as inhibitors of oxidative metal **corrosion**)

IT Lubricants
(**corrosion** inhibitor in; 2,4-hexadienoic acid or its alkali salts as inhibitors of oxidative metal **corrosion**)

IT 5194-51-4 24634-61-5, **Potassium sorbate**
RL: TEM (Technical or engineered material use); USES (Uses)
(**corrosion** inhibitors; 2,4-hexadienoic acid or its alkali salts as inhibitors of oxidative metal **corrosion**)

IT 11146-12-6, AA 1100 12597-69-2, Steel, processes 12725-27-8, AISI 303 12725-33-6, AISI 1010, processes 12731-95-2, AISI 1050, processes 37373-59-4, AISI 416 39302-81-3, 12L14, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(**corrosion** of, inhibitors for aq.; 2,4-hexadienoic acid or its alkali salts as inhibitors of oxidative metal **corrosion**)

IT 7440-47-3, Chromium, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(electroplate, **corrosion** inhibitors for; 2,4-hexadienoic acid or its alkali salts as inhibitors of oxidative metal **corrosion**)

L3 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2003 ACS

AN 2001:321108 CAPLUS

DN 134:329743

TI **Sorbic** acid and/or **potassium sorbate** as **corrosion** inhibitors for preventing rust and scale on steel surface in cooling circuits

IN Bendiner, Bernard

PA USA

SO U.S. Pat. Appl. Publ., 15 pp., Cont. of U.S. Ser. No. 336,612.

CODEN: USXXCO

DT Patent

LA English

IC ICM C23F011-00

NCL 252389620

CC 55-10 (Ferrous Metals and Alloys)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | US 2001000619 | A1 | 20010503 | US 2000-751648 | 20001229 |
| | US 6500360 | B2 | 20021231 | | |
| PRAI | US 1999-336612 | A1 | 19990618 | | |

AB The aq. soln. for preventing rust, **corrosion**, and scale on steel surface contains 0.3-1.75% K sorbate at pH .gtoreq.4.5, and is suitable for cooling circuits. The concd. soln. to be dild. at 1:16 parts with tap or deionized water contains K sorbate 270.0 mg, NaNO3 0.5 mg, and water 269.5 mg, optionally with citric acid for pH control. The K sorbate in aq. soln. promotes decreased elec. cond. and O content relative to tap

water for rust prevention on immersed steel surface, as well as for decreased susceptibility to degrdn. by microbiol. growth in recirculating systems. This permits elimination of toxic biocides in recirculating water systems. The aq. soln. can be substituted for tap water in water-based paints and similar products stored in steel cans, eliminating the need for precoating the cans with protective metals.

ST steel **corrosion** inhibitor aq **potassium sorbate**
; cooling water **potassium sorbate** inhibitor
corrosion

IT Cooling water
 Corrosion inhibitors
 (for steel; **potassium sorbate** as **corrosion**
 inhibitor for preventing aq. rust and scale on steel)

IT Cans
 (steel; **potassium sorbate** as **corrosion**
 inhibitor for preventing aq. rust and scale on steel)

IT 77-92-9, Citric acid, uses
RL: MOA (Modifier or additive use); USES (Uses)
 (cooling water contg.; **potassium sorbate** as
 corrosion inhibitor for preventing aq. rust and scale on steel)

IT 110-44-1, **Sorbic** acid 24634-61-5, **Potassium**
sorbate
RL: TEM (Technical or engineered material use); USES (Uses)
 (**corrosion** inhibitor; **potassium sorbate**
 as **corrosion** inhibitor for preventing aq. rust and scale on
 steel)

IT 12597-69-2, Steel, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (**corrosion**; **potassium sorbate** as
 corrosion inhibitor for preventing aq. rust and scale on steel)

L3 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1999:680401 CAPLUS
DN 131:324230
TI Study and development of technology for application of alcohols to coolant
and cool storage medium. 3. Physical property data of alcoholic solution
and coolant
AU Ohtsuka, Hiroshi
CS Tokyo Fine Chem. Co., Ltd., Japan
SO Reito (1999), 74(864), 876-880
CODEN: RITOA8; ISSN: 0034-3714
PB Nippon Reito Kucho Gakkai
DT Journal
LA Japanese
CC 47-4 (Apparatus and Plant Equipment)
Section cross-reference(s): 23, 48
AB The following characteristics of EtOH were examd. and were listed in
tables: the d. and kinematic viscosity of a 0-60 wt.% EtOH soln. at from
-40.degree. to +40.degree.; the f.p. and firing point of a 0-60 wt.% EtOH
soln.; the soly. of 35 **anticorrosives** in a 59 wt.% EtOH soln.;
and the corrosiveness of an **anticorrosive**-added EtOH coolant
against 6 metals, 5 rubbers, and 5 plastics. The substantive test of an
anticorrosive-added EtOH coolant was performed for 2000 h.

ST ethanol phys property data coolant refrigerant; **anticorrosive**
soly effect ethanol coolant refrigerant

IT Ethylene-propylene rubber
Fluoropolymers, uses
Neoprene rubber, uses
Nitrile rubber, uses
Polycarbonates, uses
Silicone rubber, uses
Styrene-butadiene rubber, uses

RL: ANT (Analyte); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)
 (effects on; phys. property data of EtOH soln. for application to coolant and refrigerant)

IT Coolants
 (liq.; phys. property data of EtOH soln. for application to coolant and refrigerant)

IT Refrigerants
 (phys. property data of EtOH soln. for application to coolant and refrigerant)

IT **Corrosion** inhibitors
 (soly. of; phys. property data of EtOH soln. for application to coolant and refrigerant)

IT 65-85-0, Benzoic acid, uses 69-72-7, Salicylic acid, uses 77-92-9, Citric acid, uses 88-99-3, Phthalic acid, uses 95-14-7, 1H-Benzotriazole 98-73-7, p-tert-Butylbenzoic acid 102-71-6, Triethanolamine, uses 111-20-6, Sebacic acid, uses 141-82-2, Malonic acid, uses 148-79-8, Thiabendazole 149-57-5, 2-Ethylhexanoic acid 150-90-3, Disodium succinate 527-07-1, Gluconic acid sodium salt 532-32-1, Sodium benzoate 582-25-2, Potassium benzoate 693-98-1, 2-Methylimidazole 1330-43-4, Sodium tetraborate 2492-26-4 4418-26-2, Sodium dehydroacetate 4767-00-4 6381-77-7, Erythorbic acid sodium salt 7317-67-1, L-Ascorbic acid sodium salt 7631-95-0, Sodium molybdate 7631-99-4, Sodium nitrate, uses 7632-00-0, Sodium nitrite 7758-11-4, Phosphoric acid dipotassium salt 7778-53-2, Phosphoric acid tripotassium salt 7778-77-0, Phosphoric acid monopotassium salt 14047-57-5, Sodium sebacate 16177-21-2, L-Glutamic acid sodium salt 18996-35-5, Citric acid monosodium salt 21071-31-8, Phosphoric acid triethanolamine salt 24634-61-5, **Potassium sorbate** 29385-43-1, Toly triazole 51307-92-7

RL: ANT (Analyte); MOA (Modifier or additive use); ANST (Analytical study); USES (Uses)
 (**anticorrosive**, soly. of; phys. property data of EtOH soln. for application to coolant and refrigerant)

IT 7429-90-5, Aluminum, uses 7440-50-8, Copper, uses 7440-66-6, Zinc, uses 11097-15-7, Cast iron, uses 12597-69-2, Steel, uses 12597-71-6, Brass, uses

RL: ANT (Analyte); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)
 (**corrosion** of; phys. property data of EtOH soln. for application to coolant and refrigerant)

IT 9002-84-0, Polytetrafluoroethylene 9003-07-0, Polypropylene

RL: ANT (Analyte); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)
 (effects on; phys. property data of EtOH soln. for application to coolant and refrigerant)

IT 9010-79-1

RL: ANT (Analyte); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)
 (ethylene-propylene rubber, effects on; phys. property data of EtOH soln. for application to coolant and refrigerant)

IT 9002-88-4, Polyethylene

RL: ANT (Analyte); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)
 (high-d., effects on; phys. property data of EtOH soln. for application to coolant and refrigerant)

IT 9010-98-4

RL: ANT (Analyte); TEM (Technical or engineered material use); ANST (Analytical study); USES (Uses)
 (neoprene rubber, effects on; phys. property data of EtOH soln. for application to coolant and refrigerant)

IT 9003-18-3

RL: ANT (Analyte); TEM (Technical or engineered material use); ANST
(Analytical study); USES (Uses)
(nitrile rubber, effects on; phys. property data of EtOH soln. for
application to coolant and refrigerant)

IT 64-17-5, Ethanol, uses
RL: ANT (Analyte); TEM (Technical or engineered material use); ANST
(Analytical study); USES (Uses)
(phys. property data of EtOH soln. for application to coolant and
refrigerant)

IT 9002-86-2, PVC
RL: ANT (Analyte); TEM (Technical or engineered material use); ANST
(Analytical study); USES (Uses)
(rigid, effects on; phys. property data of EtOH soln. for application
to coolant and refrigerant)

IT 9003-55-8
RL: ANT (Analyte); TEM (Technical or engineered material use); ANST
(Analytical study); USES (Uses)
(styrene-butadiene rubber, effects on; phys. property data of EtOH
soln. for application to coolant and refrigerant)

L3 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2003 ACS

AN 1999:549432 CAPLUS

DN 131:160424

TI Use of a composition or premix based on volatile **corrosion**
inhibitors, composition or premix, articles comprising said composition
and preparation method

IN Shapira, Joseph; Droniou, Patrick; Guillou, Loic; Stoianovici, Gabriela;
Delalande, Patrick

PA CFPI Industries, Fr.

SO PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DT Patent

LA French

IC ICM C23F011-02

ICS B65D081-26

CC 56-10 (Nonferrous Metals and Alloys)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|--|----------|
| | ----- | --- | ----- | ----- | ----- |
| PI | WO 9942640 | A1 | 19990826 | WO 1998-FR2920 | 19981230 |
| | W: | | | AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | |
| | RW: | | | GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | |
| | FR 2774995 | A1 | 19990820 | FR 1998-1902 | 19980217 |
| | FR 2774995 | B1 | 20020719 | | |
| | CA 2320873 | AA | 19990826 | CA 1998-2320873 | 19981230 |
| | AU 9919728 | A1 | 19990906 | AU 1999-19728 | 19981230 |
| | AU 747178 | B2 | 20020509 | | |
| | BR 9815661 | A | 20001024 | BR 1998-15661 | 19981230 |
| | EP 1056891 | A1 | 20001206 | EP 1998-964556 | 19981230 |
| | EP 1056891 | B1 | 20020403 | | |
| | R: | | | AT, DE, ES, FR, GB, IT, NL, SE | |
| | JP 2002504629 | T2 | 20020212 | JP 2000-532576 | 19981230 |
| | AT 215625 | E | 20020415 | AT 1998-964556 | 19981230 |
| | ES 2175844 | T3 | 20021116 | ES 1998-964556 | 19981230 |
| PRAI | FR 1998-1902 | A | 19980217 | | |

WO 1998-FR2920 W 19981230

AB The invention concerns the use of a compn. or premix based on volatile **corrosion** inhibitors comprising, to limit the release and/or degrdn. of the volatile **corrosion** inhibitors when the compn. or premix is formed, either an efficient amt. of a structuring agent consisting of .gtoreq.1 solid or pasty substance with a m.p. of 40-110.degree. (preferably 50-90.degree.), or a liq. substance capable of forming, mixed with a mineral filler, a solid or pasty combination. The invention also concerns a compn. based on volatile **corrosion** inhibitors comprising a compn. based on volatile **corrosion** inhibitors comprising an efficient amt. which contains an efficient amt. of a solid structuring agent. The invention further concerns polymer-based articles having as constituent the compn. or premix; the articles are useful for protecting metal parts against **corrosion**

ST metal coating volatile **corrosion** inhibitor

IT Coating materials

(**corrosion**-protective; volatile **corrosion** inhibitors embedded in protective coatings for metals)

IT Beeswax

(in protective coatings contg. volatile **corrosion** inhibitors for metals)

IT Carnauba wax

Castor oil

Chalk

Kaolin, uses

Naphthenic oils

Paraffin waxes, uses

Petrolatum

Polyoxyalkylenes, uses

Waxes

RL: TEM (Technical or engineered material use); USES (Uses)

(in protective coatings contg. volatile **corrosion** inhibitors for metals)

IT Hydrocarbon waxes, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(microcryst.; in protective coatings contg. volatile **corrosion** inhibitors for metals)

IT **Corrosion** inhibitors

(volatile **corrosion** inhibitors embedded in protective coatings for metals)

IT 65447-77-0, Tinuvin 622 LD

RL: MOA (Modifier or additive use); USES (Uses)

(anti-UV agent; in protective coatings contg. volatile **corrosion** inhibitors for metals)

IT 71878-19-8

RL: MOA (Modifier or additive use); USES (Uses)

(antioxidant; in protective coatings contg. volatile **corrosion** inhibitors for metals)

IT 61-82-5, 1H-1,2,4-Triazol-3-amine 95-14-7, 1H-Benzotriazole 100-97-0,

Hexamethylenetetramine, uses 532-32-1, Sodium benzoate 1863-63-4,

Ammonium benzoate 7632-00-0, Sodium nitrite 9010-79-1,

Ethylene-propylene copolymer 14807-96-6, Talc, uses 24634-61-5,

Potassium sorbate 24937-78-8, Ethylene-vinyl acetate

copolymer 25322-68-3 29385-43-1, Tolyltriazole 34067-47-5

237755-62-3, Lidec A 223D Part A

RL: TEM (Technical or engineered material use); USES (Uses)

(in protective coatings contg. volatile **corrosion** inhibitors for metals)

IT 9002-88-4, Polyethylene

RL: TEM (Technical or engineered material use); USES (Uses)

(wax; in protective coatings contg. volatile **corrosion**

inhibitors for metals)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Kelly, J; US 2918389 A 1959 CAPLUS
- (2) The Cromwell Paper Company; BE 702592 A 1968

L3 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2003 ACS

AN 1999:300463 CAPLUS

DN 130:299840

TI Regulating concentration of sulfate ions in boiler water for
corrosion resistance

IN Kimura, Kenichi; Nakajima, Junichi; Yamashita, Masazumi

PA Miura Co., Ltd., Japan

SO Can. Pat. Appl., 14 pp.

CODEN: CPXXEB

DT Patent

LA English

IC ICM C23F011-16

CC 55-10 (Ferrous Metals and Alloys)

Section cross-reference(s): 61

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|----------|
| | ----- | --- | ----- | ----- | ----- |
| PI | CA 2233420 | AA | 19980928 | CA 1998-2233420 | 19980327 |
| | US 6027687 | A | 20000222 | US 1998-49120 | 19980327 |
| | US 6402984 | B1 | 20020611 | US 1999-397025 | 19990916 |
| PRAI | JP 1997-94783 | A | 19970328 | | |
| | JP 1997-363539 | A | 19971215 | | |
| | US 1998-49120 | A1 | 19980327 | | |
| AB | The concn. of the title sulfate ions is controlled to .ltoreq.500 ppm. The method comprises injecting a sulfite base oxygen scavenger, including setting a concn. of residual dissolved O in boiler feed water to 2-4 ppm. The compn. of the sulfite base oxygen scavenger comprises: .gtoreq.1 of Na2SO3, K2SO3, NaHSO3, and KHSO3 3-30; NaOH or KOH 1-20; K sorbate 0.2-2 wt.%; and CoSO4 5-500 ppm. The invention effectively prevents occurrence of corrosion in carbon steel water tubes or the like of boilers. | | | | |
| ST | sulfate ion concn regulation boiler water; corrosion resistance water boiler; carbon steel water boiler corrosion resistance | | | | |
| IT | Boilers Corrosion Scavengers (regulating concn. of sulfate ions in boiler water for corrosion resistance) | | | | |
| IT | 14808-79-8, Sulfate ion, reactions RL: RCT (Reactant); RACT (Reactant or reagent) (regulating concn. of sulfate ions in boiler water for corrosion resistance) | | | | |
| IT | 10124-43-3 24634-61-5, Potassium sorbate RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses) (sulfite base oxygen scavenger contg., injection of; in regulating concn. of sulfate ions in boiler water for corrosion resistance) | | | | |
| IT | 7757-83-7 RL: OCU (Occurrence, unclassified); OCCU (Occurrence) (sulfite base oxygen scavenger contg., injection of; in regulating concn. of sulfate ions in boiler water for corrosion resistance) | | | | |
| IT | 1310-58-3, Potassium hydroxide, reactions 1310-73-2, Sodium hydroxide (Na(OH)), reactions 7631-90-5 10117-38-1 RL: RCT (Reactant); RACT (Reactant or reagent) (sulfite base oxygen scavenger contg., injection of; in regulating | | | | |

concn. of sulfate ions in boiler water for **corrosion** resistance)

IT 7773-03-7, Potassium hydrogen sulfite
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (sulfite base oxygen scavenger contg., injection of; method for injecting sulfite base oxygen scavenger and its compn. for operating boiler)

IT 11121-90-7, Carbon steel, processes
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
 (water boiler; regulating concn. of sulfate ions in boiler water for **corrosion** resistance)

L3 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:762243 CAPLUS
 DN 128:26721
 TI Deoxygenating agent compositions containing sulfurous compounds for water deoxygenation to prevent metal **corrosion** of pressure containers
 IN Nakajima, Junichi; Watari, Shunichi
 PA Miura Kogyo K. K., Japan; Miura Kenkyusho K. K.
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM B01J020-04
 ICS C09K003-00; C23F011-18; F22D011-00
 CC 61-8 (Water)
 Section cross-reference(s): 55
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 09308824 | A2 | 19971202 | JP 1996-150335 | 19960521 |
| PRAI | JP 1996-150335 | | 19960521 | | |

AB The title deoxygenating agent compns. contain sulfurous compd. deoxygenating agents, salts of metals having .gtoreq.2 valences, chelating agents, and sorbic acid (salts) stabilizers. The agents show excellent storage stability and high efficiency to decrease dissolved O in water, and the agents are applicable for steel boiler **corrosion** prevention.

ST water deoxygenation sulfurous compd compn stabilizer; metal **corrosion** prevention water deoxygenation; steel boiler **corrosion** prevention water deoxygenation

IT Water purification
 (deoxygenation; water-deoxygenating agent compns. contg. sulfurous compounds to prevent **corrosion** of pressure container metals)

IT Boilers
Corrosion inhibitors
Corrosion prevention
 (water-deoxygenating agent compns. contg. sulfurous compounds to prevent **corrosion** of pressure container metals)

IT 7757-83-7, Sodium sulfite 10124-43-3, Cobalt sulfate (coso4)
 RL: NUU (Other use, unclassified); USES (Uses)
 (in water-deoxygenating agent compns. contg. sulfurous compounds to prevent **corrosion** of pressure container metals)

IT 7782-44-7, Oxygen, processes
 RL: REM (Removal or disposal); PROC (Process)
 (removal; water-deoxygenating agent compns. contg. sulfurous compounds to prevent **corrosion** of pressure container metals)

IT 110-44-1, Sorbic acid 110-44-1D, Sorbic acid, salts 24634-61-5,
Potassium sorbate
 RL: MOA (Modifier or additive use); USES (Uses)
 (stabilizers; in water-deoxygenating agent compns. contg. sulfurous

comounds to prevent **corrosion** of pressure container metals)

L3 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1995:795095 CAPLUS
DN 123:172901
TI Manufacture of sprayable decorative materials for wall surfaces
IN Ryu, Song Ji
PA S. Korea
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 9 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
IC ICM C09D005-28
ICS E04F013-02
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 40

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|----------|
| PI | CN 1100115 | A | 19950315 | CN 1993-116833 | 19930911 |
| PRAI | CN 1993-116833 | | 19930911 | | |
| AB | Title materials are prepd. by mixing hydrophilic and pre-heated gelatin foam pastes with ground synthetic, natural, or plant fibers, and adding corrosive agents, fillers, flame retardants, and/or rustproof agents. A typical compn. comprised gelatin paste, wool fibers, gum arabia, CMC, MgO, Na ₂ WO ₄ , tartaric acid, Ca propionate, dichromate salt, pigments, and kaolin. | | | | |
| ST | sprayable fiber gelatin coating wall | | | | |
| IT | Coating materials (fiber/gelatin-based decorative coatings for walls) | | | | |
| IT | Straw | | | | |
| | Wool | | | | |
| | (fiber/gelatin-based sprayable decorative coatings for walls) | | | | |
| IT | Kaolin, uses | | | | |
| | Kieselguhr | | | | |
| | RL: MOA (Modifier or additive use); USES (Uses) | | | | |
| | (fiber/gelatin-based sprayable decorative coatings for walls) | | | | |
| IT | Gelatin, uses | | | | |
| | RL: TEM (Technical or engineered material use); USES (Uses) | | | | |
| | (fiber/gelatin-based sprayable decorative coatings for walls) | | | | |
| IT | Synthetic fibers | | | | |
| | RL: TEM (Technical or engineered material use); USES (Uses) | | | | |
| | (fiber/gelatin-based sprayable decorative coatings for walls) | | | | |
| IT | Textiles | | | | |
| | (cotton, fiber/gelatin-based sprayable decorative coatings for walls) | | | | |
| IT | 57-13-6, Urea, uses 79-09-4, Propionic acid, uses 87-69-4, Tartaric acid, uses 93-58-3, Methyl benzoate 546-93-0, Magnesium carbonate 1309-48-4, Magnesia, uses 7440-66-6, Zinc, uses 7631-86-9, Silica, uses 7784-25-0, Alum, ammonium 13472-45-2, Sodium tungstate 14807-96-6, Talc, uses 24634-61-5, Potassium sorbate | | | | |
| | RL: MOA (Modifier or additive use); USES (Uses) | | | | |
| | (fiber/gelatin-based sprayable decorative coatings for walls) | | | | |

L3 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2003 ACS
AN 1992:569865 CAPLUS
DN 117:169865
TI Preparation of an aerosol packaged glaze forming composition
IN Smith, Robert M.
PA Par-Way Group, USA
SO U.S., 4 pp.
CODEN: USXXAM
DT Patent

LA English
 IC ICM A21D015-08
 ICS A23L001-00; A23L003-00; B65B031-00
 NCL 426326000
 CC 17-4 (Food and Feed Chemistry)
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|----------|
| PI | US 5128161 | A | 19920707 | US 1991-668159 | 19910312 |
| PRAI | US 1991-668159 | | 19910312 | | |
| AB | A method for packaging a glaze formulation that is free of egg white as an aerosol spray is described. The glaze contains dextrin (preferably maltodextrin, DE 1-20%) 10-30, a plasticizer 0-6, a secondary film former 0-4% with the balance water and an antimicrobial agent. Cl ions are removed by ion-exchange and the prepn. is pasteurized, purged with N and packaged in aerosol form. The prepn. has a pH low enough to prevent bacterial growth, but not low enough to attack the container. | | | | |
| ST | glaze aerosol packaging egg free | | | | |
| IT | Bakery products (egg white-free glaze substitute for, packaging as aerosol for) | | | | |
| IT | Egg white (glaze substitutes free of, prepn. as aerosol spray of) | | | | |
| IT | Corrosion inhibitors (in aerosol sprays of egg white-free glaze substitute for food) | | | | |
| IT | Bactericides, Disinfectants, and Antiseptics (in egg white-free glaze substitute for food, packaging as aerosol in relation to) | | | | |
| IT | Sprays (of egg white-free glaze substitute for food, packaging as aerosol in relation to) | | | | |
| IT | Syrups (hydrogenated hydrolyzed starch, plasticizer in egg white-free glaze substitute for food, packaging as aerosol of) | | | | |
| IT | Ion exchangers (mixed-bed, in chloride removal from egg white-free glaze substitute for food, packaging as aerosol in relation to) | | | | |
| IT | 110-44-1, Sorbic acid 24634-61-5, Potassium sorbate RL: BIOL (Biological study) (as antibacterial in aerosol sprays of egg white-free glaze substitute for food) | | | | |
| IT | 1095-66-5, Morpholinium oleate RL: BIOL (Biological study) (as corrosion inhibitor in aerosol sprays of egg white-free glaze substitute for food) | | | | |
| IT | 16887-00-6, Chloride anion, biological studies RL: BIOL (Biological study) (egg white-free glaze substitute for food free of, packaging as aerosol of) | | | | |
| IT | 9050-36-6, Maltodextrin RL: BIOL (Biological study) (in egg white-free glaze substitute for food, packaging as aerosol of) | | | | |
| IT | 7727-37-9, Nitrogen, biological studies RL: BIOL (Biological study) (in prepn. aerosol sprays of egg white-free glaze substitute for food) | | | | |
| IT | 56-81-5, Glycerine, biological studies 57-55-6, Propylene glycol, biological studies 102-76-1 25322-68-3, Polyethylene glycol RL: BIOL (Biological study) (plasticizer in egg white-free glaze substitute for food, packaging as aerosol of) | | | | |
| IT | 9005-37-2, Propylene glycol alginate 9005-38-3, Sodium alginate RL: BIOL (Biological study) (secondary film former in egg white-free glaze substitute for food, | | | | |

packaging as aerosol of)
IT 9005-25-8
RL: BIOL (Biological study)
(syrups, hydrogenated hydrolyzed starch, plasticizer in egg white-free
glaze substitute for food, packaging as aerosol of)

L3 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2003 ACS

AN 1991:411062 CAPLUS

DN 115:11062

TI Jet-printing ink compositions containing fatty acid (salts) and ethers as
corrosion inhibitors

IN Kuwabara, Koji; Masuda, Yutaka

PA Toray Industries, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-00

CC 42-12 (Coatings, Inks, and Related Products)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 02241785 | A2 | 19900926 | JP 1989-64543 | 19890315 |
| | JP 08015808 | B4 | 19960221 | | |
| PRAI | JP 1989-64543 | | 19890315 | | |

AB Water-thinned jet-printing inks contg. dispersed dyes or pigments have
.gtoreq.1 carboxylic acid or its alkali metal salt and .gtoreq.1 cyclic
ether as **corrosion** inhibitors. Thus, C.I. Disperse Yellow 42 5,
Demol N 3, ethylene glycol 30, Na propionate (I) 0.5, 5-nitro-2-
fufuraldehyde semicarbazone (II) 0.5, and water 61% were milled to give a
dispersion ink, which showed prevention of **corrosion** after 1 mo
use in jet printing.

ST jet printing ink **corrosion** inhibitor; fatty acid salt
corrosion inhibitor; cyclic ether **corrosion** inhibitor
ink; sodium propionate **corrosion** inhibitor ink;
nitrofurfuraldehyde semicarbazone **corrosion** inhibitor ink; water
dispersed ink **corrosion** inhibitor

IT **Corrosion** inhibitors

(fatty acid or their alkali metal salts and cyclic ethers, for
water-thinned jet-printing inks)

IT Inks

(jet-printing, water-thinned, **corrosion** inhibitors for, fatty
acid or their alkali metal salts and cyclic ethers as)

IT 137-40-6, Sodium propionate 24634-61-5, **Potassium
sorbate**

RL: USES (Uses)

(**corrosion** inhibitors, contg. cyclic ethers, for
water-dispersed jet-printing inks)

IT 59-87-0 4418-26-2, Sodium dehydroacetate

RL: USES (Uses)

(**corrosion** inhibitors, contg. fatty acids or their salts, for
water-dispersed jet-printing inks)

L3 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2003 ACS

AN 1989:63496 CAPLUS

DN 110:63496

TI **Corrosion**- and scaling-inhibitors for boiler water treatment

IN Watari, Shunichi; Murata, Masahiro; Sugano, Hitoshi

PA Miura Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese
IC ICM C23F011-18
ICS C02F005-10; C23F011-12
ICA F22B037-52
CC 61-8 (Water)
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|-------------|------|----------|-----------------|----------|
| PI | JP 63166980 | A2 | 19880711 | JP 1986-312820 | 19861227 |
| | JP 01041707 | B4 | 19890907 | | |

PRAI JP 1986-312820 19861227

AB The title inhibitors comprise KOH 0-5, K₂CO₃ 2-6, K₂SO₃ 15-30, **potassium sorbate** 0.1-0.5, CoSO₄ 0.003-0.01 and sodium polyacrylate (I) 2-5 wt.%. Thus, a boiler water sample was treated with 300 mg/L of the inhibitor (contg. KOH 4.5, K₂CO₃ 4.7, K₂SO₃ 28.3, **potassium sorbate** 0.47, CoSO₄ 0.005 and I 4.7 wt.%) at 30.degree. for .apprx.3 min, resulting in the effective removal of dissolved O from the water sample. The **corrosion** and scale deposited on the boiler piping were significantly prevented.

ST boiler water **corrosion** scaling inhibitor; **potassium sorbate** boiler scaling water; sodium polyacrylate boiler scaling water

IT Water purification
(**corrosion** prevention, agents for, for dissolved oxygen removal, for boilers)

IT Water purification
(scale control, agents for, for dissolved oxygen removal, for boilers)

IT 79-10-7D, Acrylic acid, polymers, sodium salt 584-08-7, Potassium carbonate (K₂CO₃) 1310-58-3, Potassium hydroxide (KOH), uses and miscellaneous 10117-38-1, Potassium sulfite (K₂SO₃) 10124-43-3, Cobalt sulfate (CoSO₄) 24634-61-5, **Potassium sorbate**

RL: OCCU (Occurrence)

(**corrosion**- and scaling inhibitors contg., for boiler water treatment)

L3 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2003 ACS

AN 1983:165716 CAPLUS

DN 98:165716

TI Composition and sheet materials for inhibiting **corrosion** of metals

IN Stricklin, Hazel R.; Morrow, George W., Jr.

PA Daubert Industries, Inc., USA

SO U.S., 3 pp.

CODEN: USXXAM

DT Patent

LA English

IC B32B015-10; B32B015-12; B65B011-00

NCL 428341000

CC 56-10 (Nonferrous Metals and Alloys)

Section cross-reference(s): 55

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | US 4374174 | A | 19830215 | US 1981-234092 | 19810212 |
| PRAI | US 1981-234092 | | 19810212 | | |

AB Alkali metal salts or unsatd. org. acids, esp. a K salt of an acrylic acid such as sorbic acid is an excellent contact and vapor-phase **corrosion** inhibitor for Al and ferrous metals. Thus, K sorbate [24634-61-5] .apprx.1 g/ft² surface area in Kraft paper was interleaf tested with 2 Al panels sandwiched with 3 protective papers, with excellent **corrosion** protection even on the uncovered edges.

ST aluminum vapor **corrosion** inhibitor; **potassium**

sorbate vapor **corrosion** inhibitor
 IT **Corrosion** inhibitors
 (vapor-phase, **potassium sorbate** contact and)
 IT 24634-61-5
 RL: USES (Uses)
 (**corrosion** inhibition by, of aluminum, contact and
 vapor-phase)
 IT 7429-90-5, uses and miscellaneous
 RL: USES (Uses)
 (**corrosion** inhibitor of, by **potassium**
 sorbate)

L3 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2003 ACS
 AN 1982:529900 CAPLUS
 DN 97:129900
 TI Cooling liquids for food industry
 PA Asahi Glass Co., Ltd., Japan
 SO Jpn. Tokkyo Koho, 4 pp.
 CODEN: JAXXAD
 DT Patent
 LA Japanese
 IC C09K005-00
 ICA C23F011-12
 CC 48-5 (Unit Operations and Processes)
 Section cross-reference(s): 17

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 57005437 | B4 | 19820130 | JP 1979-51465 | 19790427 |
| | JP 55144080 | A2 | 19801110 | | |
| PRAI | JP 1979-51465 | | 19790427 | | |

AB An aq. propylene glycol soln. contg. a small amt. of K sorbate is used as a direct or indirect cooling liq. in the food industry. Thus, 100 parts aq. 30% propylene glycol soln. was mixed with 0.1 part K sorbate to prep. a cooling liq. When a mild steel piece was put in the cooling liq. and heated at 25.degree. for 18.5 days while aerating at 100 mL/min, its **corrosion** was 0.17 mg/dm² day.

ST cooling liq food industry; propylene glycol coolant

IT Food
 (cooling of, aq. propylene glycol contg. **potassium**
 sorbate for)

IT Cooling agents
 (propylene glycol-water, contg. **potassium sorbate**
 for food)

IT 24634-61-5
 RL: USES (Uses)
 (aq. propylene glycol contg., for cooling of food)

IT 57-55-6, uses and miscellaneous
 RL: USES (Uses)
 (coolants, with water and **potassium sorbate** for
 food)

L3 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2003 ACS
 AN 1982:141304 CAPLUS
 DN 96:141304
 TI Application of electrochemical techniques for studying the
 corrosion problems of tinplate cans
 AU Catala, R.; Cabanes, J. M.
 CS Inst. Agroquim. Tecnol. Aliment., CSIC, Valencia, Spain
 SO Revista de Agroquimica y Tecnologia de Alimentos (1981), 21(3), 341-52
 CODEN: RATLAB; ISSN: 0034-7698
 DT Journal

LA Spanish
 CC 17-5 (Food and Feed Chemistry)
 Section cross-reference(s): 56
 AB The theory and application of electrolytic polarization in the anal. of
 tinned can **corrosion** is discussed. The **corrosion**
 of tinplate on cans was related to the d. of the plate and the food in
 contact with the material, orange juice being relatively **corrosive**
 . Tinplate **corrosion** when in contact with 0.1 M citric acid
 [77-92-9] (pH 3.5) and 50 ppm nitrate could be abated by the addn. of 0.1%
 K sorbate [24634-61-5].
 ST tinned can **corrosion** electrolytic polarization; canned food
corrosion tinplate; **potassium sorbate** can
corrosion
 IT Orange juice
 Vegetable
 (canned, tinplate **corrosion** in, electrolytic polarization in
 evaluation of)
 IT Canned foods
 (**corrosion** in, electrolytic polarization in evaluation of)
 IT **Corrosion**
 (of tinplate cans, by food, electrolytic polarization in evaluation of)
 IT Electrolytic polarization
 (of tinplate, on food cans, for **corrosion** evaluation)
 IT Cans
 (tinplate, **corrosion** of, by food, electrolytic polarization
 in evaluation of)
 IT 24634-61-5
 RL: BIOL (Biological study)
 (food can tinplate **corrosion** by citric acid and nitrate
 inhibition by)
 IT 14797-55-8, biological studies
 RL: BIOL (Biological study)
 (food can tinplate **corrosion** by citric acid and,
potassium sorbate inhibition of)
 IT 77-92-9, biological studies
 RL: BIOL (Biological study)
 (food can tinplate **corrosion** by nitrate and,
potassium sorbate inhibition of)

L3 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2003 ACS
 AN 1973:161887 CAPLUS
 DN 78:161887
 TI Inhibitor of microbiological **corrosion** caused by petroleum
 products
 IN Ovcharova, T. P.; Ivanova, A. M.; Mushkalo, L. K.; Litvinenko, S. N.;
 Tyltin, A. K.
 PA All-Union Scientific-Research Institute of Canned Food and Dried
 Vegetables Industry
 SO U.S.S.R.
 From: Otkrytiya, Izobret., Prom. Obrazttsy, Tovarnye Znaki 1973, 50(4),
 64-5.
 CODEN: URXXAF

DT Patent
 LA Russian
 IC C10L; C10M
 CC 51-9 (Petroleum, Petroleum Derivatives, and Related Products)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|----------|
| | ----- | ---- | ----- | ----- | ----- |
| PI | SU 363739 | T | 19721225 | SU 1969-1338534 | 19690616 |
| PRAI | SU 1969-1338534 | | 19690616 | | |
| AB | Sorbic acid or K sorbate were used as inhibitors of the microbiol. | | | | |

corrosion caused by petroleum products.
ST petroleum product **corrosion** inhibitor; microorganism
corrosion inhibitor; **sorbic** acid **corrosion**
inhibitor; **potassium sorbate corrosion**
inhibitor; hydrocarbon oil **corrosion** inhibitor
IT Microorganism
 (**corrosion** by, **potassium sorbate** and
 sorbic acid in prevention of)
IT Petroleum products
Hydrocarbon oils
RL: USES (Uses)
 (**corrosion** inhibitors for, **potassium**
 sorbate and **sorbic** acid as)
IT 110-44-1 590-00-1
RL: USES (Uses)
 (**corrosion** inhibitors, for hydrocarbon oils contg.
 microorganisms)